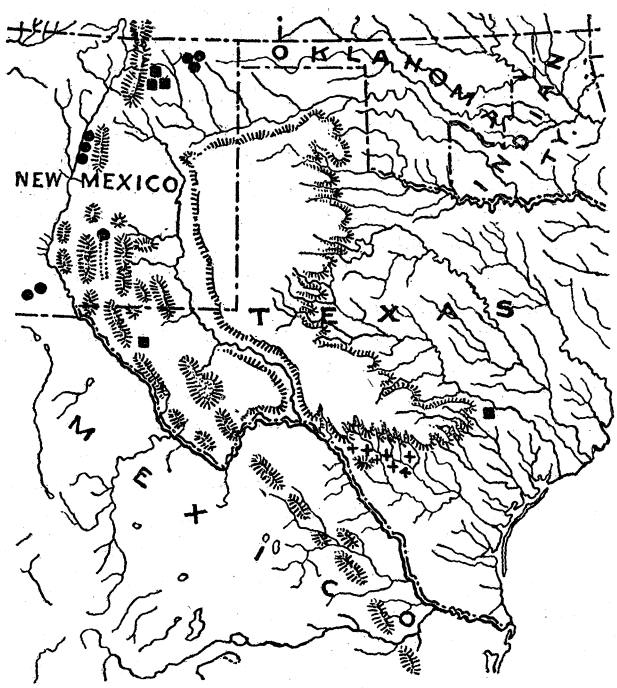
Mr. W. W. Allis, of Milwaukee, has given Columbia University the equipment for a steam engineering laboratory containing a number of valuable pieces of machinery valued at more than $15,000.

Miss Olivia Phelps Stokes has given Barnard College $5,000, the income of which is to be used for aiding poor students.

Mr. A. J. Balfour has informed the authorities of Cambridge University that a friend of his who desired to remain anonymous wished to give £2,000 for general university purposes, in four installments, the first of which has been paid.



DISCUSSION AND CORRESPONDENCE.

THE EASTERNMOST VOLCANOES OF THE UNITED STATES.

To the Editor of Science: In looking through Professor I. C. Russell's magnificent volume on the 'Volcanoes of North America,' I was surprised to see (page 129) the statements that 'No volcanoes sufficiently recent to be recognized by their topographic forms occur east of the sharply defined eastern border of the Cordilleran mountain series,' and on page 191 he also says that the volcanoes occur in the Cordilleran region west of the meridian of Denver. On Plate 5 a map is given showing the distribution of volcanoes in the United States, upon which none are given east of the Rio Grande except the Spanish Peaks.

These conclusions on the part of Professor Russell are erroneous and mar his otherwise excellent work, for some of the most beautiful and perfect volcanic craters in the United States occur in New Mexico, not only far east of the longitude of Denver, but fully 200 miles east of the true Rocky Mountain front, which extends between Trinidad and Las Vegas.* These, as have been described by the writer,† consist of a group of craters lying to the south of Folsom Station, in an eroded plain at the foot of the older lava capped Trinidad Mesa, which extends eastward from the Rocky Mountains for

*A brief notice of Mount Capulin was published by Orestes St. John in 'Notes on the Geology of Northwestern New Mexico;' Bull. U. S. Geol. and Geog. Survey of the Territories, Vol. II., 1876.

†Bull. Geol. Soc. Am., Vol. 3, p. 99, 1891.

a hundred miles or more along the Colorado-New Mexican line. The most conspicuous of these craters is Mount Capulin, six miles south of Folsom Station. This, a beautiful cinder cone (altitude 9,000 feet), rises nearly 2,750 feet above the railroad, with a vast crater at its top nearly a mile in diameter, slightly broken down on its western side. From its summit many flows can be traced. To the southward, from six to twenty miles, there are several similar craters, while to the northward there are several smaller ones. Around these craters there are numerous surface flows of vesicular, ropy lava, extending eastward to within sight of the Texas line.

These are the easternmost known craters of the Rocky Mountain region, and their occurrence at the foot of the Raton plateau, near the western edge of the Llano Estacado, is interesting. The cinder cones are clearly of a more recent origin than the adjacent basaltic cap of the Raton plateau, for they are situated in an eroded valley between the main mesa and an outlier—the Sierra Grande—and at a lower altitude than either of them. They are also apparently more recent than the late Tertiary deposits of the Llano Estacado, the original surface of the lava resting upon the latter and not covered by it except in case of the wind-blown débris.

While these are the only craters of the United States which are east of the true Rocky Mountain front, there are other important ones lying east of the Rio Grande which have escaped Mr. Russell's notice, notably the Cerrito lying between Galisteo and the Rio Grande, consisting of several cones rising to nearly 1,000 feet above the plateau. Still to the southward in the great bolson desert, which lies between the Organ and Sacramento ranges of southern New Mexico, there is a comparatively recent volcanic cone from which a stream of mobile lava has flowed for sixty miles to the southward. There are also several other craters just west of the Rio Grande and El Paso, in southern New Mexico, which have escaped Professor Russell's notice.

The Folsom craters, east of the true Rocky Mountain front, are the ones which upset deductions which would otherwise be tenable concerning the occurrence of volcanic cones approximately along oceanic shore lines. A bulletin for the United States Geological Survey is being prepared upon the Folsom locality by Mr. S. Prentiss Baldwin, of Cleveland, Ohio, who, at my request, some years ago undertook a thorough exploration of that most interesting region.

In addition to the true cinder cone craters we have have specified, that portion of New Mexico east of the Coloradoan group of the Rocky Mountains (Snow Range) which ends abruptly near the latitude of Sante Fé, is unusually rich in older volcanic phenomena, such as superficial lava flows and old volcanic necks or stocks of the type of Mount Taylor or the Spanish Peak which Russell includes in his map as volcanoes and two of which, near Fort Union, he describes.

Besides the omission of the true craters of New Mexico, the work gives no reference to the old volcanic phenomena of the Texas region, such as occur so abundantly in the Trans-Pecos region, and to the eastward along the interior margin of the Coastal Plain, between Austin and Del Rio.

It would have made matters much clearer to the reader had Professor Russell used a series of symbols upon his map to distinguish the kinds of volcanoes there plotted, such as living craters, extinct craters and volcanic stocks representing the ruins of old craters.

The accompanying sketch of the Texas-New Mexican region giving supplementary data concerning the distribution of volcanic phenomena will be of value to the reader of the work. The black discs are true volcanic craters; the square stocks or necks of former craters, and the crosses, are laccolites.

ROBERT T. HILL.

LITERARY EMBRYOLOGY.

TO THE EDITOR OF SCIENCE: In the *Atlantic* for this month is an article by Mr. Frederic Burk on the 'Training of Teachers.' On p. 553–554 occurs the following paragraph, in which I have ventured to italicize those parts which seem to me absolutely incorrect. It appears singular that in an article on *teaching*, severely criticising prevalent methods, there